REMARKS

Claims 1, 4, 6, 7, 10, 12 through 18 and 20 through 27 are pending in the case.

Claims 1, 4, 6, 7, 10, 12 through 18 and 20 stand rejected.

Claims 21 through 27 have been allowed.

Rejection of the Claims

Examiner has rejected claims 1, 6, 7 12, 13 and 17, 18 and 20 under 35 U.S.C. § 102 (e) as being anticipated by USPN 6,885,462 (Lee). Examiner has rejected claims 4 and 10 under 35 U.S.C. § 103 (a) as being unpatentable over Lee. Examiner has rejected claims 14 and 16 under 35 U.S.C. § 103 (a) as being unpatentable over Lee in view of USPN 6,714,309 (May). Applicant respectfully traverses the rejections and requests reconsideration.

Response to New Arguments Raised by Examiner

Examiner has pointed out that in Lee, signal processor 9 calculates a ratio from the detected light both transmitted through the etalon and reflected by the etalon. Examiner has asserted that this ratio is the transmitted signal divided by the reflected signal. From this, Examiner has argued that this ratio is capable of being used to sharpen the peaks of the transmitted signal. This argument by Examiner is incorrect and is apparently based on a misunderstanding of what Lee teaches.

Particularly, Examiner has failed to take into account that when optical component 5 divides the transmitted beam 55 by the reflected beam 56 to obtain a ratio, the result is a *constant power ratio (dB)*. That is, Lee determines wavelength drift by comparing the *optical power* of the transmitted beam 55 with the *optical power* of the reflected beam 56. See Lee at column 3, lines 26 through 30. This power ratio is a constant value that is dependent on wavelength drift. Lee clearly shows this in Figure 6. See also Lee at column 4, lines 17 through 20.

Since the ratio of the *optical power* of the transmitted beam 55 with the *optical power* of the reflected beam 56 obtained by Lee is a constant *power ratio (dB)* based on the amount of wavelength drift, it would not be possible to use this power ratio to sharpen the peaks of the transmitted signal, as asserted by Examiner.

In order to sharpen the peaks of the transmitted signal, it would be necessary to obtain signal ratios (not power ratios as taught by Lee). As taught by Applicant's Specification (see for example, page 3, lines 4 through 10), transmission peaks of an etalon become taller and more narrow when the transmitted signal is divided by the reflected signal. Such a sharpening of peaks would not be possible using the power ratio calculated by Lee.

Criteria for a Rejection under 35 U.S.C. § 102

The criteria for a rejection under 35 U.S.C. § 102(b) has been clearly defined by the courts and confirmed by the U.S. Patent and Trademark Office. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Examiner has failed to show that each and every element of the independent claims 1, 7 and 17 set forth in the claims is found either expressly or inherently in Lee. Based on this, Applicant is traversing the rejections of all the claims.

Below, Applicant points out subject matter within each independent claim that is not disclosed or suggested by Lee or the other cited art. On the basis of this, Applicant believes all the claims are patentable over the cited art.

Discussion of Independent Claim 1

Claim 1 sets out a method for monitoring a laser signal. Light transmitted through an etalon is detected to produce a transmitted signal. Light reflected from the etalon is detected to produce a reflected signal. Peaks of the transmitted signal are sharpened by dividing the transmitted signal by the reflected signal. None of the cited art discloses or suggests the sharpening of peaks of the transmitted signal by dividing a transmitted signal by a reflected signal.

For example, Lee discloses detecting wavelength drift by dividing the optical power of the transmitted beam 55 by the optical power of the reflected beam 56 to obtain a power ratio which is in turn used to correspond an actual wavelength drift of channel (step S41). See column 3, lines 26 through 30 and lines 42 through 45, Figure 4 and Figure 6. As shown by Figure 6 of Lee, the

calculated power ratio is a constant value that dependents on wavelength drift. As discussed above, this constant power ratio could not be used to sharpen the peaks of a transmittal signal.

In order to sharpen the peaks of the transmitted signal, it would be necessary to obtain signal ratios (not power ratios as taught by Lee). As taught by Applicant's Specification (see for example, page 3, lines 4 through 10), transmission peaks of an etalon become taller and more narrow when the transmitted signal is divided by the reflected signal. Such a sharpening of peaks would not be possible using the power ratio calculated by Lee.

Discussion of Independent Claim 7

Claim 7 sets out a system that monitors a laser signal. A first detector detects light transmitted through the etalon to produce a transmitted signal. A second detector detects light reflected from the etalon to produce a reflected signal. A monitor sharpens peaks of the transmitted signal by dividing the transmitted signal by the reflected signal. None of the cited art discloses or suggests the sharpening of peaks of the transmitted signal by dividing a transmitted signal by a reflected signal.

For example, Lee discloses detecting wavelength drift by dividing the optical power of the transmitted beam 55 by the optical power of the reflected beam 56 to obtain a power ratio which is in turn used to correspond an actual wavelength drift of channel (step S41). See column 3, lines 26 through 30 and lines 42 through 45, Figure 4 and Figure 6. As shown by Figure 6 of Lee, the

calculated power ratio is a constant value that dependents on wavelength drift. As discussed above, this constant power ratio could not be used to sharpen the peaks of a transmittal signal.

In order to sharpen the peaks of the transmitted signal, it would be necessary to obtain signal ratios (not power ratios as taught by Lee). As taught by Applicant's Specification (see for example, page 3, lines 4 through 10), transmission peaks of an etalon become taller and more narrow when the transmitted signal is divided by the reflected signal. Such a sharpening of peaks would not be possible using the power ratio calculated by Lee.

Discussion of Independent Claim 17

Claim 17 sets out a system that monitors a laser signal. A first detection means detects light transmitted through the measurement means to produce a transmitted signal. A second detector means detects light reflected from the measurement means to produce a reflected signal. A device means sharpens peaks of the transmitted signal by dividing the transmitted signal by the reflected signal. None of the cited art discloses or suggests the sharpening of peaks of the transmitted signal by dividing a transmitted signal by a reflected signal.

For example, Lee discloses detecting wavelength drift by dividing the optical power of the transmitted beam 55 by the optical power of the reflected beam 56 to obtain a power ratio which is in turn used to correspond an actual wavelength drift of channel (step S41). See column 3, lines 26 through 30 and

lines 42 through 45, Figure 4 and Figure 6. As shown by Figure 6 of Lee, the calculated power ratio is a constant value that dependents on wavelength drift. As discussed above, this constant power ratio could not be used to sharpen the peaks of a transmittal signal.

In order to sharpen the peaks of the transmitted signal, it would be necessary to obtain signal ratios (not power ratios as taught by Lee). As taught by Applicant's Specification (see for example, page 3, lines 4 through 10), transmission peaks of an etalon become taller and more narrow when the transmitted signal is divided by the reflected signal. Such a sharpening of peaks would not be possible using the power ratio calculated by Lee.

Conclusion

Applicant believes this Amendment has placed the present application in condition for allowance and favorable action is respectfully requested.

Respectfully submitted,
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